

## **Self-aligned MOSFET having an Oxide Region below the Channel**

### **ABSTRACT**

A transistor device having a strained channel and a method for forming the transistor device are disclosed. The transistor device includes a semiconductor region having a top surface. The transistor device includes a source region, a drain region, and a channel region in the semiconductor region. The channel region is between the source region and the drain region. The transistor device includes an oxide region within the channel region and a gate overlying the channel region. The oxide region is laterally spaced from the source and drain regions. The transistor device includes a gate dielectric between the gate and the channel region.